

### PART III: ALTERNATIVES, INCLUDING THE PREFERRED ALTERNATIVE

---

In evaluating the proposal to designate a Cordell Bank National Marine Sanctuary (CENMS), the National Oceanic and Atmospheric Administration (NOAA) has analyzed institutional, boundary, management, and regulatory alternatives in terms of achieving optimum protection of the ecosystem, improving scientific knowledge of the area, and promoting public understanding of the value of Cordell Bank resources. This section describes the alternatives considered in the evaluation process. Part IV describes the environmental consequences of the alternatives described below.

The fundamental choice of alternatives is between the two institutional alternatives: (1) no action or continuing the status quo, and (2) the preferred alternative, Sanctuary designation as a complementary measure to existing programs. Boundary, management, and regulatory alternatives are considered in the context of the preferred institutional alternative.

#### Section I: Status Quo Alternative

---

The proposed CENMS is located entirely beyond three miles from the coast and is therefore under the jurisdiction of Federal statutes with the exception that the California Department of Fish and Game (CF&G) shares jurisdiction over fishing operations in Cordell Bank waters with the National Marine Fisheries Service (NMFS). The other Federal agencies with existing primary responsibilities in the area of Cordell Bank are the U.S. Fish and Wildlife Service (FWS) and the Minerals Management Service (MMS) of the Department of the Interior; and the U.S. Coast Guard (USCG) of the Department of Transportation. This section will review briefly the responsibilities of these agencies in the Cordell Bank area. Additional information is provided in Appendix 2.

The CF&G is responsible for enforcing California fishing laws in the 200-mile wide exclusive economic zone (see Appendix 2) as well as in State waters of the territorial sea. Among these laws is a statute prohibiting gill-net fishing in an area that includes Cordell Bank. The CF&G also assists in the enforcement of Federal fishery regulations.

The NMFS works with the CF&G, under the Magnuson Fishery Conservation and Management Act, with approving and enforcing fishery management plans (FMP's) prepared by regional fishery management councils. Through a cooperative enforcement agreement, the CF&G is also deputized to enforce FMP's beyond three miles from the coast. The Cordell Bank fish stocks affected by FMP regulations are lingcod, rockfish, and salmon.

The NMFS shares responsibility with the FWS for implementation of the Marine Mammal Protection Act and the Endangered Species Act. The protection of cetaceans and pinnipeds is the responsibility of the NMFS. The FWS is responsible for protecting endangered bird species. One of these species, the brown pelican, forages in the vicinity of Cordell Bank. Another, the short-tailed albatross, was recently sighted in the area (PRBO, 1985).

The USCG, in addition to its enforcement of fishing regulations, is responsible for enforcing regulations under the Clean Water Act (CWA) and the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) to prevent pollution caused by discharges from vessels of oil, hazardous substances, or other pollutants. The USCG is also responsible for regulating vessel traffic, maintaining boater safety, and coordinating search and rescue operations.

The Environmental Protection Agency (EPA) has regulatory responsibilities with regard to ocean dumping and sewage outfalls. Title I of

the Marine Protection, Research and Sanctuaries Act prohibits the transportation of any materials from the United States for the purpose of dumping them into the territorial sea, the contiguous zone, and the ocean beyond without a permit from EPA.

The MMS is responsible for managing offshore oil and gas exploration and development operations in accordance with the provisions of the Outer Continental Shelf Lands Act. This responsibility was formerly divided between the Bureau of Land Management and the U.S. Geological Survey.

Under the status quo alternative, existing activities and controls would continue as presently administered. No comprehensive management scheme for the Bank's resources would be implemented.

## Section II: Designation as a National Marine Sanctuary

---

This institutional alternative, NOAA's preferred alternative, proposes to designate Cordell Bank as a National Marine Sanctuary, in accordance with the provisions of Title III of the Marine Protection, Research and Sanctuaries Act of 1972, as amended, 16 U.S.C. 1431 et seq. This alternative is detailed in Part II of this document, the Sanctuary management plan. Through the management plan and the implementing regulations (Appendix 1), the preferred alternative ensures the protection of vital Sanctuary resources and Bank habitat, offers research opportunities, and provides an interpretive program to enhance public awareness about Cordell Bank. This comprehensive program is not possible under any of the existing institutional structures alone.

The preferred alternative will cost some \$130,000 per year or \$650,000 over five years. Approximately half of these funds will be allocated to research and resource protection and half to interpretation and administration. The preferred boundary was selected because it correlates

closely with the areal distribution of important Bank resources; the management alternatives were selected because they are more cost-effective than other alternatives and conform closely to the goals of the National Marine Sanctuary Program. The regulations were selected because they will improve protection of Cordell Bank resources from the adverse impacts of human activities.

#### A. Boundary Alternatives

A number of boundary options were identified in the evaluation process. These options were narrowed to three, which were then considered in terms of (1) the distribution of living resources requiring protection and (2) management logistics.

##### 1. Boundary Alternative 1

This boundary alternative, the preferred alternative, establishes a Sanctuary area of 397.05 square nautical miles. It includes all waters within a line extending 180° from the northernmost boundary of the Point Reyes-Farallon Islands National Marine Sanctuary (PRNMS) to the 1,000 fathom depth contour northwest of Cordell Bank, then south along this contour until it joins the boundary of the PRNMS (see Figure 5). This alternative, or a variation of it, was the most frequently suggested in comments solicited by NOAA at the scoping meeting in April, 1984 and at the public hearings held on September 29 and 30, 1987 to receive comments on the proposal, and written comments on the DEIS/MP.

The rationale for establishing a Sanctuary of this size is that it would afford more protection to marine mammals and seabirds. While marine mammals are already protected under the provisions of the Marine Mammal Protection Act this statute does not protect their habitat. Since designation of the

Sanctuary is designed to protect the habitat and natural resource values of Cordell Bank's core area, the expanded buffer zone serves to protect an area not only where seabirds and marine mammals feed but also an area within which they are widely distributed during migration.

## 2. Boundary Alternative 2

This alternative establishes a Sanctuary area of 101.10 square nautical miles. It includes all waters within a line three nautical miles beyond the 50 fathom depth contour surrounding the Bank (see Figure 6). The alternative is designed to protect the distinctive resources dependent upon the immediate Bank environment. In addition to the presence of Allopora hydrocoral and other benthic organisms, this ecosystem includes marine mammals and seabirds drawn to Cordell Bank specifically because it is an important feeding ground.

This boundary encompasses the area most frequented by seabirds according to observations made in the 1981-1982 surveys by Cordell Bank Expeditions. Because marine mammals are attracted to Cordell Bank waters by the same food resources that attract seabirds, it can be assumed that this alternative encompasses the core area in which marine mammals feed. The marine mammal sightings made during the 1981-1982 Cordell Bank Expedition surveys were concentrated in waters over the Bank and in the area just beyond the fifty-fathom contour (Webber and Cooper, 1983).

## 3. Boundary Alternative 3

This boundary establishes a Sanctuary area of 18.14 square nautical miles. It includes all waters within the 50 fathom contour (see Figure 6) and would protect the benthic communities on Bank surfaces and the feeding ground above it, but not the nearby waters also used as a feeding ground by marine mammals and seabirds.

# Boundary Alternative #1

— · — · — Proposed Boundary #1  
Cordell Bank National  
Marine Sanctuary

———— Point Reyes-Farallon  
Islands National  
Marine Sanctuary

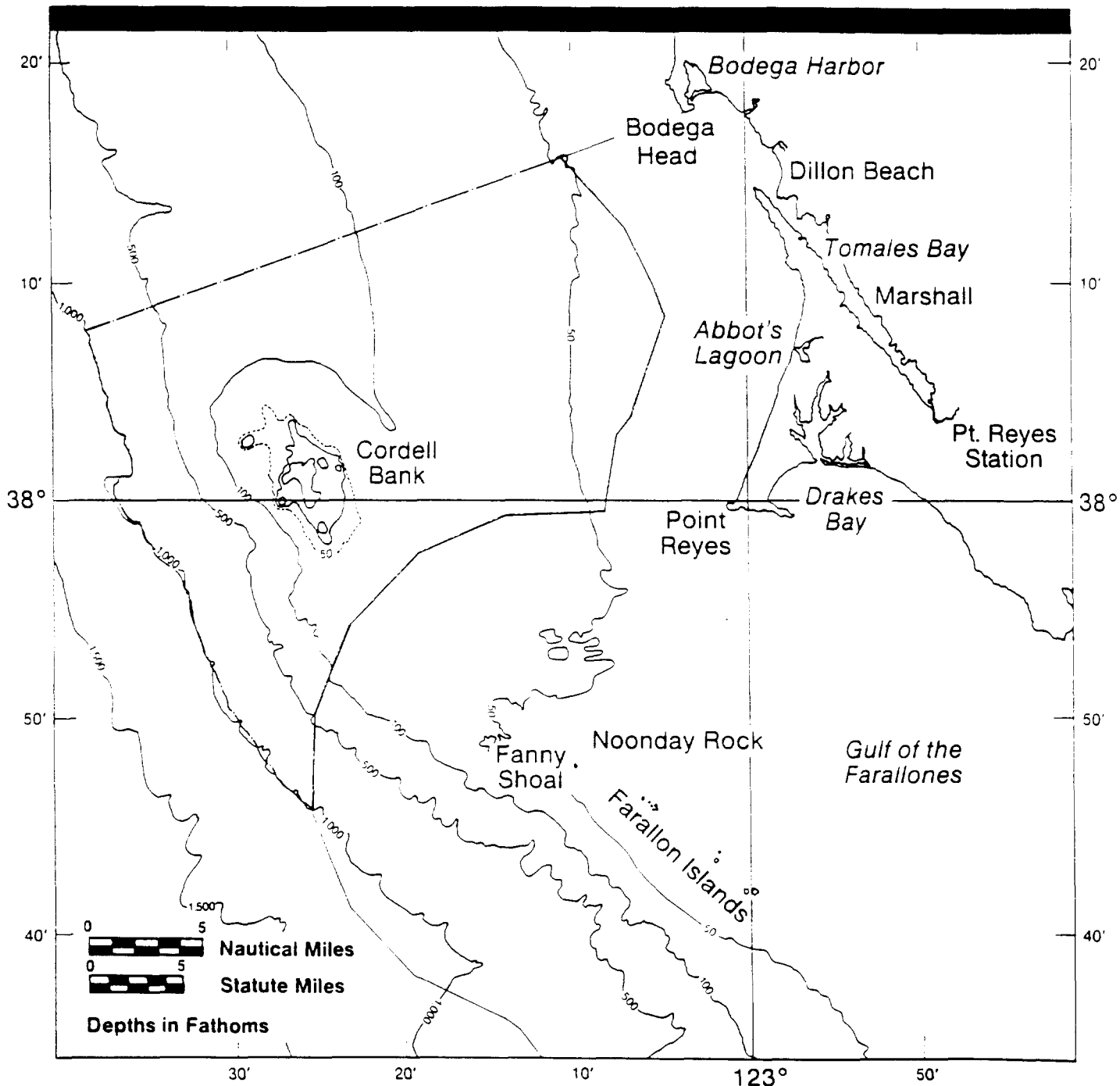


Figure 5

Source: National Ocean Service Nautical Chart 18640.

# Boundary Alternatives #2 and #3

- Proposed Boundary #2  
Cordell Bank National  
Marine Sanctuary
- Proposed Boundary #3  
Cordell Bank National  
Marine Sanctuary
- Point Reyes-Farallon  
Islands National  
Marine Sanctuary

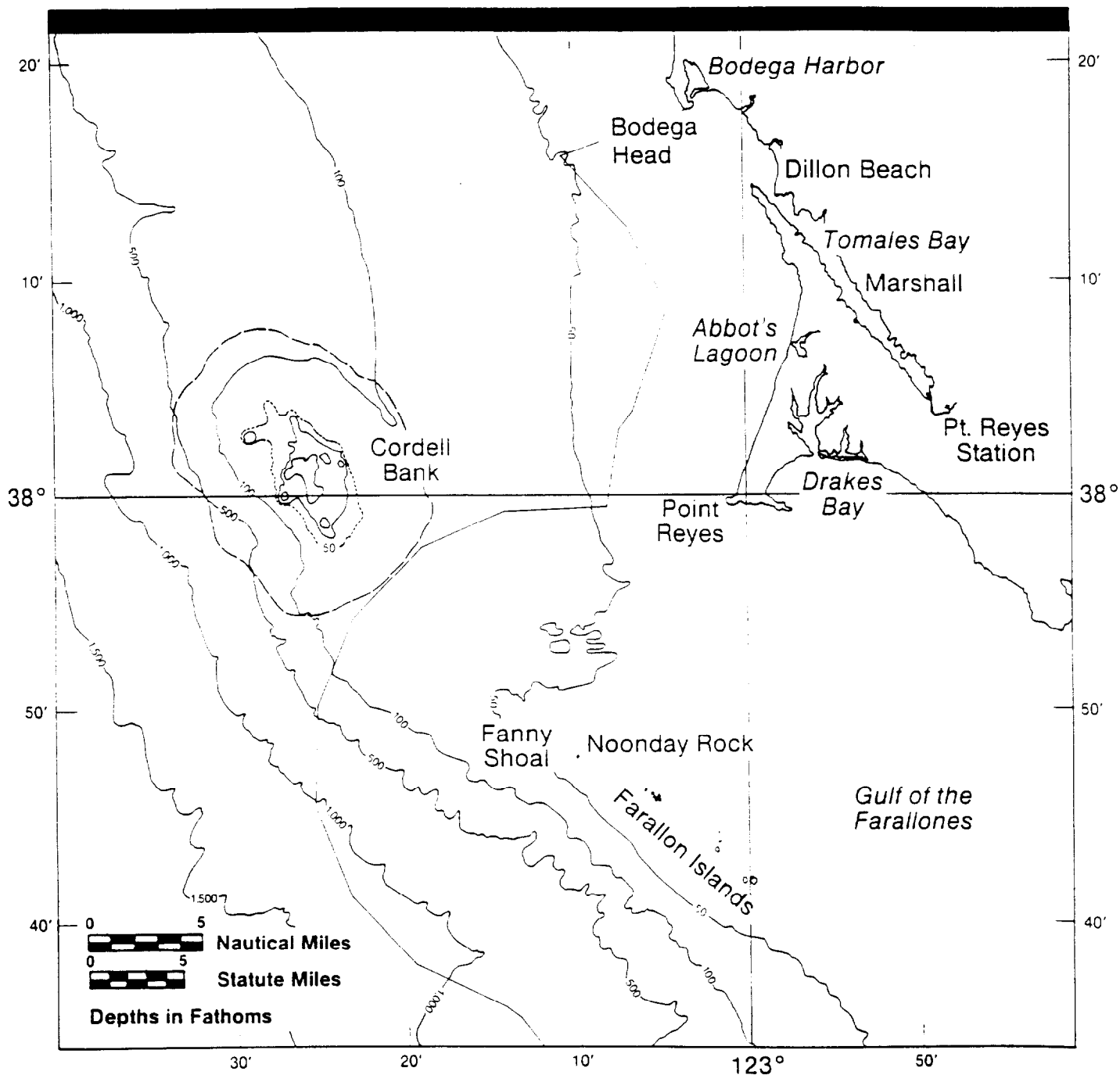


Figure 6

Source: National Ocean Service Nautical Chart 18640.

## B. Management Alternatives

Two management alternatives were identified and considered in terms of (1) resource protection, research, and interpretation requirements and (2) cost-effectiveness.

### 1. Management Alternative 1

Under this alternative, NOAA would establish a management and administrative system for the CENMS that is entirely separate and distinct from that of the PRNMS. Using this approach, minimum staffing needs would entail the employment of a Cordell Bank Sanctuary Manager and supporting staff at a cost of some \$100,000. A separate headquarters and visitor center could be constructed at an estimated cost of \$500,000 in addition to land purchase and operating expenditures. Likely sites for the facility include the areas of Point Reyes and Bodega Bay, both of which are departure points for Cordell Bank, and the Marin Headlands.

There are three major disadvantages to this alternative, aside from its cost. First, a headquarters and visitor center situated away from San Francisco would have low visibility and visitor use and would limit interpretive opportunities involving other organizations, many of which are located in the San Francisco Bay area. Second, management programs for the proposed CENMS and the PRNMS are in many ways complementary and would best be done in a coordinated manner; and third, the protection and interpretation of Cordell Bank resources does not require the attention of a full-time Sanctuary Manager at this time.

### 2. Management Alternative 2

The preferred alternative is to combine the management and administrative



system of the CENMS with that of the PRNMS. Under this approach the management of Cordell Bank resource protection, research and interpretive programs would be a collateral function of the PRNMS Manager and staff. The headquarters for the two Sanctuaries would be the same. The headquarters and administrative offices of the PRNMS are at Fort Mason, San Francisco, in the National Park Service (NPS) headquarters for the Golden Gate National Recreation Area (GGNRA).

The preferred alternative would not significantly increase the PRNMS budget for administrative personnel and facilities, yet it would eliminate the need to include these items in the CENMS budget. The CENMS budget would thus include primarily the non-administrative costs of the resource protection, research and interpretation programs. Moreover, the CENMS would have the additional advantage of high visibility resulting from a location in the heavily visited GGNRA and its proximity to San Francisco. Finally, the implementation of the management plan could begin immediately upon designation as the Sanctuary Manager and staff would already be in place and prepared to begin work to implement the management plan.

### C. Regulatory Alternatives

Regulatory alternatives governing five types of activity (discharges and deposits; removing, taking or injuring, or attempting to remove, take, or injure benthic resources; removing, taking or injuring, or attempting to remove, take, or injure historical or cultural resources; hydrocarbon activities; and anchoring) were evaluated in terms of need and effectiveness for resource protection. Activities not included in these five categories, such as fishing, would continue to be subject to existing regulations.

## 1. Discharges

### (a) No Regulation

Under this alternative, the provisions of the Clean Water Act (CWA), Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) and the National Contingency Plan would provide some protection from potentially harmful discharges. Discharges of oil and chemical waste are regulated under provisions of the Act to Prevent Pollution from Ships of 1980, as amended in 1982 and 1987 (33 USC 1901 et seq.). On October 27, 1988 the United States Coast Guard announced a Notice of Proposed Rule Making that would implement the pollution prevention requirements of Annex V of the International Marine Pollution Convention, MARPOL 73/78 (53 FR 43622). These proposed regulations are expected to reduce the incidence of discharges of plastics and other ship-generated garbage into the marine environment.

### (b) Prohibit Discharges

The preferred alternative is to prohibit discharges or deposits, with certain exceptions (See Part II, Section III. B. 2(a)) into Sanctuary waters, or from outside the Sanctuary boundaries if such discharge or deposit enters the Sanctuary and injures a Sanctuary resource. This regulation would apply to discharges or deposits of solid wastes as well as effluents. In addition NOAA will certify permits, such as the National Pollutant Discharge Elimination System (NPDES) permits, from other authorities for activities which are prohibited by Sanctuary regulations such as discharges. NOAA may deny certification or require additional conditions if necessary to protect Sanctuary resources.

## 2. Removing, Taking, or Injuring Benthic Resources

### (a) No Regulation

Although the depth and isolation of Cordell Bank makes it unattractive as a site for recreational diving, such diving is possible, especially in the fall when the weather and sea-state are generally calm. Under the no-regulation alternative, divers could collect samples for their own use or for commercial purposes without legal constraint.

### (b) Prohibit Damage to Benthos

The preferred alternative is to prohibit removing, taking or injuring, or attempting to remove, take, or injure benthic organisms except by permit for scientific research, educational, salvage, or Sanctuary management purposes.

## 3. Hydrocarbon Activities

### (a) No Immediate Regulation

This is the preferred alternative. Cordell Bank is not at present subject to OCS leasing. The five-year plan for the OCS Leasing Program excludes the area of Cordell Bank within approximately the fifty-fathom contour (91 m or 49.76 fathoms). However, leasing could occur beyond the fifty-fathom contour, where it is possible that hydrocarbon operations could impact the Sanctuary's resources. If areas within the Sanctuary are leased for hydrocarbon activities in the future, NOAA has authority to certify and condition (or deny certification for), as necessary, permits or other authorizations granted to operators (lessees or contractors) by other authorities for activities within the Sanctuary. Such conditions may include, but are not limited to, the establishment of a monitoring program and scientific research studies to measure the effects of hydrocarbon activities on Sanctuary resources and the restriction of discharges. Any

conditions imposed by NOAA on other authorities' permits will be made in consultation with those agencies and the permittees.

In addition, NOAA has the ability to enact emergency regulations to prohibit hydrocarbon activities, or any other activities in the Sanctuary to prevent immediate, serious and irreversible damage to a Sanctuary resource. Such emergency regulations shall remain in effect for no more than 120 days, during which time permanent regulations may be proposed by NOAA.

(b) Immediate Regulation of Hydrocarbon Activities

Under this alternative, a regulation would be promulgated prohibiting oil and gas activities throughout the Sanctuary.

4. Anchoring

(a) No Regulation

This is the preferred alternative. At present few vessels visit Cordell Bank and anchor on it. However, anchoring on the Bank can injure or destroy benthic organisms by physical impact and by dragging of the anchor chain. Anchoring could have a significant effect on the benthic flora and fauna and should be carefully monitored.

(b) Prohibit Anchoring

Under this alternative, regulation of anchoring would apply to Cordell Bank and the area within the 50 fathom contour surrounding Cordell Bank. It is in this area where the benthic resources are most concentrated and potentially susceptible to anchor damage.

5. Historical and Cultural Resources

(a) No Regulation

This is the preferred alternative. At present, NOAA is unaware of any historical or cultural resources within the proposed Cordell Bank National

Marine Sanctuary. NOAA recognizes that the lack of information does not mean such resources are not present. It is necessary to protect and manage any historical and cultural resources that may be in the Sanctuary. Therefore, any activity that leads to the discovery or finding of cultural or historical resources will be carefully monitored.

(b) Prohibit Removing, Taking, or Injuring Historical or Cultural Resources

Under this alternative, a prohibition on removing, taking or injuring, or attempting to remove, take, or injure historical or cultural resources would apply throughout the Sanctuary.